

Water Right Number 3079-3

1. Considered 1-26, 19 77
2. Name of Applicant DORIS NENABER
3. Post Office Address IROQUOIS
4. Amount of water claimed .85
5. Source of water supply 80' DEEP WELL
6. Water to be used for IRRIGATION
Acres to be irrigated 60
7. Water to be diverted and used in BEADLE County
about 4W, 6S Miles of IROQUOIS
8. Proof of Publication Received 1-5-77

9. Application

JAN 25, 1977

CALLED DORIS NENABER

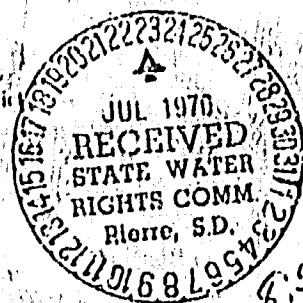
10. Remarks:

DIVERSION LOCATED
IN THE NE $\frac{1}{4}$ NE $\frac{1}{4}$
SEC. 32 T10N, R50W

LANDS TO BE IRRIGATED
IS 60 ACRES IN THE
NE $\frac{1}{4}$ T10N, R50W

Application needs
changing

Map No. 2403-3 Water Division No. 3 JAMES RIVER District 3070-3
(Blanks to be Filled by the Engineer for the W. R. C.)



APPLICATION FOR PERMIT

To Appropriative Water within the State of South Dakota

(NOTE--Draw a line through items not applicable)

1. Name of Applicant Doris M. Nenaber
Postoffice address RR #2, Box 114, Irquois, State South Dakota 57353
If a corporation show date and place of incorporation _____
2. Method of accomplishing work (contract, employment of others, or by direct labor) Direct Labor
3. Name of diversion work Doris M. Nenaber Unit # 1
4. Amount of water claimed (cubic feet per second) .85
5. Source of water supply Ground Water
6. Location of point of diversion A POINT IN THE NE 1/4 SECTION 32,
T10N R59W County Beadle

7. Annual period or periods during which water is to be used March - November
8. Use to be made of water, (irrigation, industrial, municipal, commercial, recreation, etc.) Irrigation
9. For irrigation use: Total number of acres to be irrigated 60
List below each forty acre subdivision, or lot, or fraction thereof and show number of acres to be irrigated in each.

Land Description	No. Acres Irr.	Land Description	No. Acres Irr.
N.E. Quarter of 32-110-59	60		

Attach sheet if more space is needed

10. Time required to complete construction of water supply system 5 years. Additional time required to complete application of water to the proposed beneficial use 2 years.
11. Choice of newspaper for Notice of Intent to Appropriative Water publication The Daily Plainman, Huron, S.D.
12. Principal Features of the Proposed Water Supply System.

A. Works proposed to divert water from its natural source.

Pump Row

B. Works proposed to transport water to place of use.

Main Line

C. Works proposed to apply water to beneficial use.

Guns

Estimated Total Cost \$.

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map.
(See instructions concerning preparation.)

STATE OF SOUTH DAKOTA

County of Beadle

I, Doris M. Nenaber the applicant, certify that I have read the foregoing application, and have examined the attached map and that the matters therein stated are true and that I intend, and am able to complete the necessary construction.

Signed Doris M. NenaberSubscribed and sworn to before me this 29 day of June, 1970

Notary Public (or other qualified officer)

WATER RIGHT APPLICATION APPROVAL

The Water Rights Commission hereby approves Water Right Application No. 3079-3DORIS NENAGIER

(Applicant)

R.R. #2, Box 114

(Post Office Address)

TRICQUOISSOUTH DAKOTA 573-3

(State)

With the following modifications:

The irrigation well approved under this Permit will be located near domestic wells and other irrigation wells which may obtain water from the same aquifer. The irrigation well owner, under this Permit, shall control his irrigation withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in irrigation wells having prior water rights.

CA 12
BY ACTION OF WATER RIGHTS COMMISSION
DATE 5-6 BY DEC 3790-5

Date of first receipt of application JULY 23, 19 76

Date of return to applicant for correction, amendments or changes required _____, 19 _____

Date of receipt of corrected application AUGUST 6, 19 76Approved JANUARY 26, 19 77, Recorded in Book 17 Page 20WATER RIGHT PERMIT NO. 3079-3

The Water Rights Commission hereby grants and issues this Water Right Permit No. 3079-3 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as modified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is JULY 23, 19 76.
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before JULY 26, 19 79.
3. The whole of said work is to be completed on or before JANUARY 26, 19 82.
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is JANUARY 26, 19 84.
5. The water appropriated shall be used for the purpose of IRRIGATION.

6. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be injuriously affected by this appropriation.

7. The amount of the appropriation herein granted shall not exceed .85 cubic feet per second; neither shall it exceed the capacity of the above described water supply system, nor shall it exceed the amount of water needed for beneficial uses served, and if for the irrigation purposes said appropriation must be limited to not more than 3 acre feet per acre per year and be limited to not more than one-seventieth (1/70) of one cubic foot of water per second of time for each acre of land to which water is

actually and beneficially applied for irrigation on or before JANUARY 26, 19 84; said water to be used during the following described annual period: MARCH - NOVEMBER.

Witness my hand this 4TH day of APRIL, 19 77

WATER RIGHTS COMMISSION

By:

John Hatch
Chief Engineer, Executive Officer

Certificate of Construction Issued _____, 19 _____

Water License Issued _____, 19 _____

PAGE NO.

N.W.-32-110-59-Beadle
LOCATION County

DATE _____

RIG NO.

Lloyd
Peterson Jr.
FOREMAN

[illegible]

Form 2A Wells, Dugouts or Water Storage Dams (Supplement to form 2)

12 Principal Features of the Proposed Water Supply System (continued.)

D. Well Information or Estimates

(1) Drill Hole, Diameter _____, Depth _____

(2) Casing, Type _____ Diameter _____ Thickness _____
(wood, concrete, steel, etc.)

(3) Perforated Screen.

Type _____, Diameter _____, Length _____

(4) Gravel Pack, Thickness _____, Length of gravel pack _____

E. Dugout Information or Estimates

(1) Surface dimensions _____, Depth _____

F. Fill out for Either a Well or a Dugout. *Log will be furnished by driller

(1) Water Bearing Materials. (Please attach a copy to test well log if available.)

Character of Water bearing materials _____

Depth to top of water bearing material _____

Depth to bottom of water bearing material _____

Thickness of water bearing material _____

Depth to water (ground surface to water level) _____

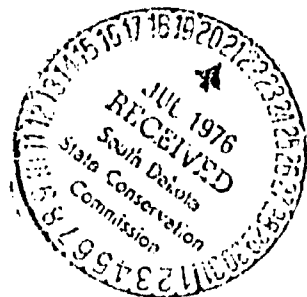
(2) Distance to nearest existing household or livestock watering wells.

On same owner's property 30 rds. On property owned by others 480 rds.

G. Water Storage Dams.

If the proposed water use system contains one or more water storage dams, please show in the space below, the height, maximum water depth, surface area and storage capacity of each storage dam. The location of each water storage dam should be shown on the water right map.

Don M. Newman
Signature of Applicant



July 19, 1976

Ms. Doris Nenaber
R.R. #2, Box 114
Iroquois, SD 57353

Dear Ms. Nenaber:

We have completed the analysis of your water sample (#76-718) and the application materials have been received from the Huron Drilling Co. The receipt for your payment and the original copy of the report of analysis are enclosed for your keeping. I am also enclosing a copy of the AES publication #13 with the quality of this water for irrigation purposes plotted approximately by means of the red cross in the chart on the outside back cover. As you will see, it is in the high salinity, low sodium category, but it is close to being medium in salinity. There is a further problem with the water, however, in that it has enough bicarbonate ions so that the carbonate exceeds the sum of calcium and magnesium and will thus cause the water to be a carrier of residual sodium carbonate and can cause chemical changes in the soil which are related to soil structure.

The most serious hazard in this proposal, however, is the poor suitability, in general, of the soils which you propose to irrigate. There is an area in the north part of the quarter marked 12A on your soil map, this is Eneet soil, and it is quite well suited. However, it is not very large and is irregular in shape. The area marked 44, Durrstein silt loam, is absolutely unsuitable for irrigation and should not be considered.

South of this soil area which extends all the way from the west side to the northeast corner are areas of soil which are fairly well suited to irrigation. However, all of them have some disadvantage or other. The depressional areas are the main problem and the Houdek soil and the Houdek-Dudley complex (26B) have quite a bit of area in it with severe claypan situation. A wet season in these areas would cause much difficulty in seed bed preparation and planting of crops.

Accordingly, if you proceed to develop this water supply and irrigate this land, you should be aware that there are claypan problems and salt problems both and that the water is not of excellent quality. If you do proceed, you should keep a rotation with alfalfa and grass on the land a good share of the time; perhaps as much as 60 or 70% of the time. You should also irrigate in substantial quantities and as infrequently as possible, especially during the warm part of the year. Small grain production with cool season irrigation may be much better for you than attempting to raise corn in these soils.

Ms. Nenaber
July 19, 1976
Page 2

A copy of this letter is accompanying your application materials, and a copy of the water analysis to the State Conservation Commission. You will be hearing from them in the near future.

Sincerely yours,

L. O. Fine

L. O. Fine
Water Quality Lab

LOF:ckb

Enclosures

cc: State Conservation Commission

D. Pahl

Dick Fadgen, County Extension Agent

Kenneth Houska, District Conservationist

Huron Drilling Co.



STATE CONSERVATION COMMISSION
SUPPORTING INFORMATION
FOR APPROPRIATION OF GROUND WATER IN ACCORDANCE
WITH SDCL 46-6-3 AS AMENDED
(THIS FORM REQUIRED FOR PROPOSED GROUND WATER IRRIGATION ONLY)

NAME Doris H. Nenaber

ADDRESS R.R. #2 Box 114, Liguois, South Dakota 57353

COUNTY Beadle

LEGAL DESCRIPTION

1. WELL LOCATION North of the N.W. Quarter of 32-110-59

2. LOCATION OF AREA TO BE IRRIGATED N.W. Quarter of 32-110-59

TYPE OF IRRIGATION

3. GRAVITY _____ TOWLINE _____ CENTER PIVOT _____ GUN X

4. CROPS TO BE IRRIGATED Corn, Alfalfa, Small Grain

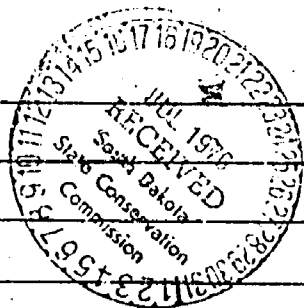
WATER QUALITY

5. SAMPLE NUMBER 76-718

6. SALINITY (EC X 10⁶) 999 (high)

7. SODIUM (SAR) 3.97 (calc - med)

8. RESIDUAL SODIUM CARBONATE (meq/l.) 1.42



I do hereby certify that a chemical analysis of the ground water representative of that used to irrigate shall be acquired from South Dakota State University and: the soils information has been acquired from Beadle Conservation District, County Extension office or Soil Conservation Service.

and:

that the legal description for the location of the well and land to be irrigated is true and correct.

Doris H. Nenaber
APPLICANT'S SIGNATURE

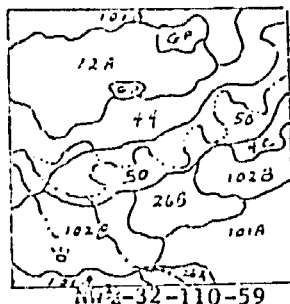
SUBSCRIBED AND SWORN BEFORE ME THIS
10 DAY OF July 19 76.

Doris H. Nenaber
(TITLE OR SEAL)

Alfred J. Helt
APPROVED/DISAPPROVED

(SOILS INFORMATION ON REVERSE SIDE)

SOIL MAP



SOIL LEGEND

- 4C Houdek-Ethan loams, 6 to 9 percent slopes
This unit consists of deep well drained loamy soils with calcareous substratums. Permeability is moderately slow. The subsoils contain 30-35% clay. Most of the slopes in these areas are less than 8%.
- 12A Enet loam, 0 to 2 percent slopes
These are well drained soils with 20-40 inches of loam over sand and gravel. Permeability is moderate in the loamy upper part and rapid in the sands and gravels. Clay loam glacial till is at depths below 40 inches in some places.
- 26A Dudley-Stickney silt loams, 0 to 3 percent slopes
This unit consists of moderately well drained soils with 4 to 10 inches of friable loamy surfaces over dense claypan subsoils. These soils have slow permeability and salts in the subsoil. Included within these units are small areas of enclosed depressions.
- 26B Houdek-Dudley complex, 3 to 6 percent slopes
The Houdek part consists of deep well and moderately well drained soils with calcareous substratums. The subsoils contain 30-35% clay. Depth of the calcareous clay loam substratum ranges from 18 to 30 inches. Permeability is moderately slow. Intermingled with the Houdek soils, the Dudley soils in small to large areas reduce farmability in wet seasons. Dudley soils consist of moderately well drained soils with 4-10 inches of friable loamy surfaces over dense claypan subsoils. Permeability is slow and there are salts in the subsoil. Included within the complex unit are small areas of enclosed depressions.
- 44 Durrstein silt loam, 0 to 2 percent slopes
Wetness, high salt content and slow permeability make these soils unsuitable for irrigation.

Doris Nenaber Unit



50

Bon loam

This unit consists of deep moderately well and well drained loamy soils on nearly level surfaces. These soils are occasionally flooded. The physical properties of these soils make them generally well suited for irrigation.

101A

Houdek-Prosper loams, 0 to 2 percent slopes

This unit consists of deep well and moderately well drained loamy soils with calcareous substratum. The subsoils contain 30-35% clay. Depth to the calcareous clay loam substratum ranges from 18 to 30 inches. Permeability is moderately slow. Included within these areas are small depressions and small areas of soil with claypan subsoils which contain salts. Drainage or fill of these included areas may become desirable to prevent ponding and excessive wetness.

102B

Houdek-Prosper loams, 2 to 6 percent slopes

The Houdek and Prosper soils are described in the 101A mapping unit. The unit differs primarily in the degree of slope.

Doris Nenaber Unit

Soil Conservation Service
Beadle County



REPORT OF ANALYSIS
 Water Quality Laboratory
 Water Resources Research Institute
 South Dakota State University
 Brookings, South Dakota 57006

Submitted by: Doris Nenaber
 Address: Iroquois, SD 57353
cc: Huron Drilling, Inc.
P.O. Box 1422
Huron, SD 57350

Date Rec'd June 30, 1976
 Sample No. 76-718
 Identification # 1 Well-
NW 1/4, Sec. 32, T 110N, R 59W

WATER ANALYSIS

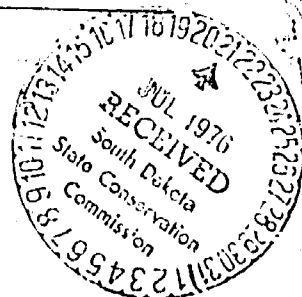
Calcium (Ca)	75	ppm*	3.75	me/l**
Magnesium (Mg)	16	ppm	1.31	me/l
Sodium (Na)	145	ppm	6.31	me/l
Potassium (K)	9	ppm	0.23	me/l
Sulfate (SO ₄)	214	ppm	4.45	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	10	ppm	0.28	me/l
Bicarbonate (HCO ₃)	395	ppm	6.48	me/l
Carbonate (CO ₃)		ppm		me/l
Iron (Fe)		ppm		me/l
Fluoride (F)		ppm		me/l
Hardness (EDTA as CaCO ₃)		ppm		me/l
Alkalinity (Methyl Orange)	324	ppm (as CaCO ₃)		g.p.g.***
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	999	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	3.97			
Sodium	54.39	% of cations		
Residual sodium carbonate	1.42	me/l		
pH	7.11			
Others:				

*ppm=parts per million

**me/l=millequivalents per liter

***g.p.g.=grains per gallon

COMMENTS: Total cations 11.60 me/l
 Total anions 11.21 me/l



By: Shirley Mittan

Service Performed	Amount Due
Irrigation analysis	\$8.00 PAID

Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment

Sample No. 76-718

Amount Enclosed \$

Signed

Form 6 - Notice of Intent to Appropriate Water

No. 307-3

Publish first publication, on or before Jan 12, 19 77

**NOTICE
INTENT TO APPROPRIATE WATER**

Pierre, South Dakota 57501

1, 19 75

Notice is hereby given that Doris Menabaz

whose post office address is Treco, S.D., South Dakota, has made an application in accordance with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use

25 cubic feet of water per second of time from the Treco water through the main line, the point of diversion of which is to be located in the NE 1/4 of Sec. 10, T. 10N, R. 59W

of Section 10, Twp. 10N, Range 59W. Said water to be used for the purpose of providing irrigation on the following described land:

NE 1/4, Sec. 10, T. 10N, R. 59W

This application No. 307-3 will be considered by the Water Rights Commission at their office at Pierre upon the 25th day of January, 19 77, at 10:00 A.M. All interested persons may appear and be heard.

WATER RIGHTS COMMISSION

By:

**BURTON F. JONES
Water Rights Specialist**

BFJ/bw

cc: Doris Menabaz, R. R. # 2, Box 114, Treco, South D. 57553

Form 8 - Proof of Publication - Notice of
Intent to Appropriate Water

No. _____

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) ss.
County _____)

I, Branda Haskett hereby
certify that the annexed printed copy of Notice of Intent to Appropriate
Water was taken from the Huron Daily Plainsman

A newspaper which during the whole time of publication of said notice
herein after stated, has been and is printed and published in the _____

_____ city _____ of Huron
County of Beadle and State of South Dakota;
that the said notice was published in said newspaper on the following
two dates:

_____ December 28, 1976 _____

_____ January 4, 1977 _____

Branda Haskett
(Signature)

Beadle
(Title)

_____ January 4, 1977 _____

(Date Signed)

F.P. 12-28-76 L.P. 1-4-77

**NOTICE INTENT TO
APPROPRIATE WATER**
Pierre, South Dakota 57501
December 21, 1976

Notice is hereby given that Doris
Henaber whose post office address is
Iroquois, South Dakota, has made an
application in accordance with the
provisions of the water laws of South
Dakota for a permit to appropriate
for beneficial use .85 cubic feet of
water per second of time from
ground water through the Henaber
No. 1, the point of diversion of which
is to be located in the NW1/4 NW1/4 of
Section 32, Twp. 110N, Range 59W.
Said water to be used for the purpose
of providing irrigation on portions of
the following described land:
NW1/4, Section 32, T110N, R59W.
R59W.

This application No. 3079-3 will be
considered by the Water Rights
Commission at their office at Pierre
upon the 26th day of January, 1977,
at 10:00 A.M. All interested persons
may appear and be heard.

WATER RIGHTS COMMISSION
BURTON F. JONES
Water Rights Specialist
No. 760 (adv.)

